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The Northeast Utilities System

March 21, 2011

Robert R. Scott
Director, Air Resources Division
Department of Environmental Services
29 Hazen Drive
Concord, New Hampshire 03302

**RE: Comments on DES Preliminary Determination on Mercury Baseline**

Dear Director Scott:

Public Service Company of New Hampshire ("PSNH") submits the following comments on behalf of its customers in response to the New Hampshire Department of Environmental Services ("DES"), Air Resources Division's Preliminary Determination of Baseline Mercury Input, dated February 17, 2011. PSNH is committed to the reduction of mercury emissions from its plants as demonstrated by its expedited efforts to construct and operate the state-of-the-art wet flue gas desulfurization system ("the Scrubber System") at Merrimack Station in Bow, New Hampshire, in accordance with the legislative mandate (RSA 125-O:11-18). The Scrubber System is the technology specifically selected by the legislature consistent with the guidance provided by the Air Resources Division on the basis that this system will achieve the maximum achievable reductions in both SO2 and mercury emissions at Merrimack Station.

PSNH appreciates DES's efforts to support this project since the 2006 passage of the law; however, the recent DES decision on the mercury baseline is incontrovertibly and fundamentally flawed for numerous reasons but most prominently because it relies on a mistaken interpretation of the statutory phrase "coal used traditionally" contained in RSA 125-O:14, I(a). The entire section reads as follows:

> Baseline mercury input shall be determined as follows: (a) No later than the first day of the second month following the effective date of this section, and continuing for 12 months thereafter, a representative monthly sample of the coal used traditionally (not to include trial or test coal blends) by each affected source shall be collected from each of the units identified in subparagraph (b) and analyzed to determine the average mercury content of the fuel for each unit expressed in pounds of mercury input per ton of coal combusted at each affected source. The mercury content of the coal derived from these analyses for each affected source shall be multiplied by the average annual throughput of coal for the period 2003, 2004, and 2005 (average tons of coal combusted per year) for each respective affected source to yield the average pounds of mercury input per year into each affected source. The sum of these annual input pound averages from each affected source shall equal the baseline mercury input.

RSA 125-O:14, I(a) (emphasis added).

The critical term here is the word "traditionally." The question at hand is what coal has PSNH "traditionally" used. The subject language is clear and unambiguous. Thus, when interpreting such language in a statute, the terms must be considered as a whole and accorded their *plain* and *ordinary* meaning. *Appeal of Town of Bethlehem*, 154 N.H. 314, 319 (2006); *see also Sweeney v. Ragged Mt. Ski Area*, 151 N.H. 239, 241 (2004). The term "traditionally" derives from the word "tradition," which means "customary," "continuing pattern," "handed-down," "customary or characteristic method or manner."[1] Synonyms include "established" and "conventional."[2] Thus, the question is what coal has been used in a continuing pattern on a customary, established basis?

In its preliminary determination, DES did not use the plain, ordinary meaning of the term "traditionally." Rather, DES defined the term exclusively by reference to the parenthetical that follows the word "traditionally." DES stated that "this parenthetical serves as an explanation of the meaning of the phrase coal used traditionally." DES is wrong, and interpreting the phrase in such a manner violates the rules of statutory construction. The U.S. Supreme Court has held that, "[t]he use of parentheses...is meant simply to be illustrative...". *Chickasaw Nation v. United States*, 534 U.S. 84, 89 (2001). Moreover, the United States Court of Appeals for the Fourth Circuit held that, "[a] parenthetical is, after all, a parenthetical, and it cannot be used to overcome the operative terms of the statute." *Cabell Huntington Hospital, Inc. v. Shalala*, 101 F.3d 984, 990 (4th Cir. 1996).

The parenthetical here is meant to clarify that under no circumstances should trial coal or test blend coal be used in the calculations to determine coals "traditionally" used. That is all the parenthetical is meant to do. It certainly is not intended or permissible, as the United States Supreme Court made clear, to allow the parenthetical illustration to swallow the broader definition or, as the Fourth Circuit Court of Appeals held, "overcome the operative terms of the statute." The operative term – "traditionally" – has a broad, well understood, unambiguous meaning that transcends the limited interpretation DES has used here. Merrimack Unit 2 has been in operation since 1968—there is absolutely no reasonable explanation for ignoring the first 30 years of operating history and the coal consistently and traditionally burned during that time period. As DES is well aware, detailed inventory records exist clearly establishing that Loveridge and then Bailey comprise the "traditionally" used coals at the Station. Inventory records from 1968 until current day clearly establish a pattern of usage over time and by tonnage of what constitutes traditional coal and what constitutes a trial coal or a test blend of coals.

For further clarification, a simple example best illustrates this point.

A hypothetical facility can use four types of coal: Type A, Type B, Type C, and Type D. Type A has been used consistently for 20 or 30 years and is clearly "traditional" coal. Type B is a trial fuel and has been used intermittently but has caused operational problems and is not an option for future long-term use. Type C is used in varying blended amounts in test fuel blends, generally in efforts tied to achieving emissions reductions, while monitoring operational impact and availability. Type D is the world of coal which exists beyond that used traditionally at PSNH facilities, and which has not been used on a trial basis or in a test blend. This is a fuel of critical importance (demonstrating the importance of fuel flexibility), since such fuel provides future options, and, going forward, may be used in a trial run or test blended as fuel, but which is clearly not traditional.

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[1] *See* http://dictionary.reference.com/browse/tradition (last visited March 17, 2011).

[2] *See* http://www.thefreedictionary.com/traditional (last visited March 17, 2011).

Under the plain meaning of the statute, Type A coal is "traditionally" used because there is a continuing, established, customary pattern of use, such as Bailey coal at Merrimack Unit 2. Type B coal is a trial coal and clearly, based on the plain meaning of the statute, not a coal "traditionally" used, such as Russian or Indonesian coal. Type C coal, such as Venezuelan coal, is a component in a test fuel blend which is not a traditional coal because there is no continuing, established, customary pattern of use over time nor is the amount or mixture consistent. The blend is varied in an attempt to achieve certain results without operational impact. However, because it has been used successfully within the last 4 or 5 years, albeit on a limited, blended basis, depending on operational and non-operational factors, it is not a traditionally used coal. The critical point is that certain constraints exist—perhaps availability, cost, or operational concerns—that require the Type C fuel blend to be flexible. Use of these coals, by their very nature, vary considerably and thus, on their face, cannot be said to be traditionally used.

The point of this exercise is simple: it illustrates that during any snapshot of time taken from a long operating history, there are coals that do not meet the definition of "traditionally used" under the statute but which may be burned for several years at a time depending on availability and price and operational impact, yet these are not traditional coals. DES entirely ignored this distinction. In addition, it based its conclusion on the false premise that any coal which is not a "trial or test blend" coal is a "traditionally used" coal—there is, in fact, a world of coal, Type D, beyond "traditional," "test blend coals," and "trial" coal. DES made this error by violating the canons of statutory construction, as articulated in the cases cited above, which require a focus on the operative term, not on the parenthetical which is subservient to the operative term.

Thus, if we consider the situation at Merrimack Unit 2 which began operations in 1968, the Type A traditional coal relied on for the decades prior to the turn of the century was Loveridge coal and then Bailey coal. However, in the late 1990s and early 2000s, as a result of the New Hampshire Clean Power Strategy and its predecessor reports, leading up to the passage of the New Hampshire Clean Power Act in 2002 and required emissions reductions from PSNH plants, PSNH began using various fuels and fuel blends on a trial basis with the primary goal of achieving SO2 reductions while concurrently analyzing the impact on the unit's operations. With the passage of the Clean Power Act, it became even more essential to burn mid- to low- sulfur coals in order to identify a low-cost and effective solution to reduction of SO2 emissions. This test program, involving multi-year tests of coal blends, with the goal of finding viable alternatives to the traditional higher-sulfur coals, was essential given the volatility of the SO2 allowance market and the required emissions reductions under the NH Clean Power Act. These test fuel blends, including Venezuelan coal, truly varied—PSNH does not receive a "blended" fuel but rather distinct coal from various sources which is then blended at the plant--since the potential long-term operational effects on the cyclone boilers were unknown. The test program did have the benefit of significantly reducing SO2 emissions which is well documented. (See attached illustration.)

In 2004, regulatory and legislative attention began to focus on mercury emissions as well as SO2 and PSNH began to test fuels aggressively to determine compatibility with the activated carbon injection program that began in 2005 and continued for several years as a result of a grant from the Department of Energy, The final report produced, available on the Department of Energy website, which summarizes the results of activated carbon injection testing at Merrimack Unit 2 during April 1, 2006-April 2, 2008, emphasizes repeatedly that the coals burned during this time period and immediately prior to the long-term test (shorter term test in 2005), were "test blend" coals utilized purposefully to gain the greatest benefit from the injection of the activated carbon. For example, the final report states: "The Unit 2 boiler is 336 MW Babcock & Wilcox (B&W) cyclone-fired unit that is firing a test blend of medium-sulfur

eastern bituminous and Venezuelan coals to maintain a target goal of 1.2% for SO2 and mercury control."(Merrimack Final Scientific/Technical Report at 7).

Because DES was informed on an ongoing basis of PSNH's efforts to reduce both SO2 and then mercury emissions through test fuel blends, and because DES was familiar with historic use of coal at the Stations, PSNH did not believe it was necessary or consistent with legislative goals—or an environmentally beneficial course of action—to terminate burning all test blends of coal for the fuel sampling and analysis period.

Now, in hindsight, to penalize PSNH for these efforts and declare that the coals in use at that time were traditional is not only fundamentally unfair, but flies in the face of the statute and the facts demonstrating what actually were traditionally used coals.

The recent DES baseline mercury determination is significantly different from DES's own published calculations regarding mercury baseline as set forth in the New Hampshire Clean Power Strategy in 2001 and which was meant to serve as a "factual" basis for emissions reductions to be required in the forthcoming drafted legislation to be known as the Clean Power Act. In that document, DES calculated annual baseline mercury emissions from the PSNH coal-fired plants to be 328 pounds per year. The baseline period was 1996-1997, immediately prior to the start of PSNH first efforts to reduce SO2 emissions, followed several years later by efforts to reduce mercury emissions. This baseline period excluded any trial coal or test fuel blends and was based on traditional coal used at the plant, Bailey coal. As DES knows, the New Hampshire Clean Power Strategy was the basis for the Clean Power Act which became effective in 2002 and, of critical importance, provided the mercury emissions calculations that formed the basis for the goals to be achieved in the drafting of the mercury reduction law in 2006. The DES calculation of 328 pounds was touted repeatedly over the years following the publication of the New Hampshire Clean Power Strategy as a basis for legislative action and, in fact, was relied on by the legislators and by the company. For DES to change its widely accepted position at this late date by significantly changing its calculations based on a limited snapshot in time, disregarding 40 years of existing fuel data, and arbitrarily selecting the test fuel blend of its choice in blatant disregard of the factual background, interactions between DES and PSNH, and the statutory requirement that test fuel blends be excluded from calculations, is nothing less than arbitrary and capricious and contrary to the intent of the law.

The simple consequence of this DES baseline determination is that going forward, PSNH will not be able to comply with the mercury emissions reduction law using the traditional coals that work most effectively with cyclone boilers and are most readily and reliably available. That outcome is directly contrary to what the legislature intended because it effectively reads the word "traditionally" right out of the statute. PSNH would be compelled to use blends of non-traditional coals that could create operational and availability risks as well as increased costs for our customers. It is precisely for this reason that the legislature contemplated that "traditional" coals would be used in the calculation of the baseline. Moreover, the preliminary determination would have the effect of dramatically reducing the flexibility PSNH has to choose among a wide-range of coals or to continue testing various blends from different mines. Both DES and the Public Utilities Commission have long recognized and acknowledged that such fuel flexibility is critical to the efficient operation of Merrimack Station. Such flexibility allows for the optimization of operations, the avoidance of supply disruption, the maintenance of reliability, and the opportunity to control fuel costs. All of these benefits would be severely constrained by a decision that essentially compels PSNH to use a potentially unavailable blend of coals that is overly reliant on foreign sources (most notably Venezuelan) that have repeatedly presented problems caused by supply disruptions.

In fact, within the last few months, PSNH's supplier of Venezuelan coal has declared a series of *force majeure* events which it claims prevent it from supplying the contractually designated quantities of coal on a timely basis. PSNH has been informed by our supplier that upon expiration of the existing contract, long-term contracts for Venezuelan coal will most likely no longer be available. It is PSNH's understanding that coal deliveries from Venezuela have similarly ended for other North American users. In other words, at this time it appears that Venezuelan coal is no longer dependably available on a regular basis. At best, Venezuelan coal may be available from time to time on the spot market, but that means that it is no longer a reliable fuel option for PSNH, or any other North American user. These facts unambiguously illustrate why the legislature modified the word "coal" with the word "traditionally": so that long-standing customary use would be the predicate for establishing the baseline. By contrast, interpreting the statute as DES has done, contrary to legislative intent, puts a straitjacket on PSNH and places dangerous limits on the company's flexibility to deal with events such as the Venezuelan supply disruption.

PSNH requests that DES reconsider its preliminary determination regarding the mercury baseline in accordance with the clear statutory language and with its own prior position. In addition, PSNH reminds DES that PSNH is proceeding with the construction and operation of state-of-the-art technology, specified by DES to the legislature, on an expedited basis, in order to achieve significant mercury reductions. The achieved mercury reductions must, as the statute specifies, if greater than 80 percent, be sustained insofar as the proven operational capability of the system allows (RSA 125-O:13, V). PSNH has great expectations for the Scrubber System and the environmentally beneficial reductions in both mercury and SO2 emissions, but requires the flexibility to choose among various fuels to best meet its obligations to provide reliable, affordable power to its customers.

Yours truly,

William H. Smagula, P.E.
Director – PSNH Generation

cc: John MacDonald, Vice President Generation - PSNH
Linda T. Landis, Senior Counsel - PSNH
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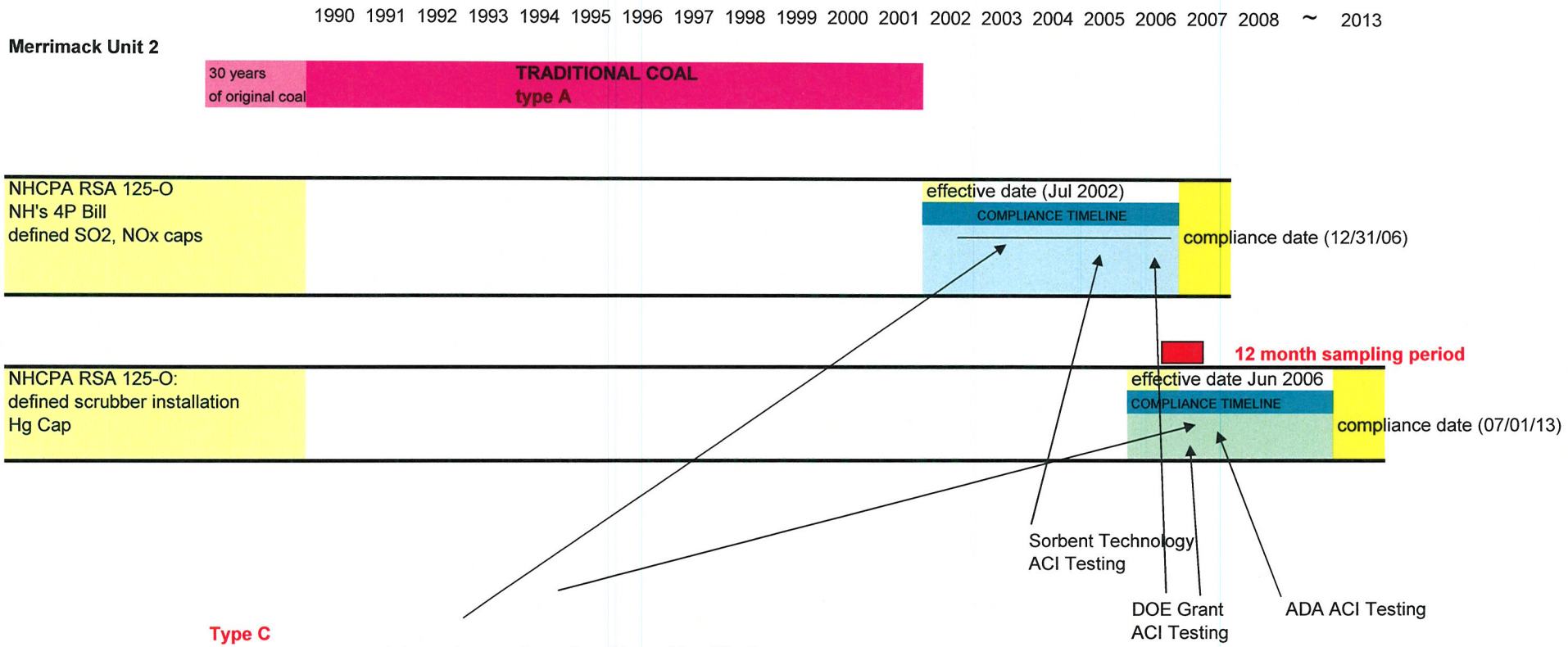
# Illustration of Merrimack Unit 2's Coal Blend Testing during the Compliance Timeline




**Type C**

**TEST COAL BLENDS (note the number of problems identified)**

| | |
|---|---|
| 1/1/1 | Bailey / Venezuelan / Pocahontas (problematic during wet weather) |
| 2/1/1 | Bailey / Venezuelan / Pocahontas (problematic during very wet weather) |
| 3/1 | Bailey / Pocahontas (problematic during very wet weather) |
| 2/1 | Bailey / Pocahontas (problematic during wet weather) |
| 2/1 | Bailey / Venezuelan (occasional tapping issues) |
| 1/1 | Bailey / Venezuelan (occasional tapping issues) |
| 1/1/1 | Bailey / Venezuelan / Russian (extremely fine, caused handling problems) |
| 3/1/1 | Bailey / Venezuelan / Russian (extremely fine, caused handling problems) |
| 2/2/1 | Bailey / Venezuelan / Russian (extremely fine, caused handling problems) |

**type B** - Russian trial coal that was unsatisfactory